

A Three-Factor Scale of Attitudes Toward Guns

Nyla R. Branscombe, Julie A. Weir, and Paul Crosby

Department of Psychology, University of Kansas, Lawrence, Kansas

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Guns figure prominently in American culture. There is, however, considerable variability in attitudes toward guns. The beliefs and feelings that comprise attitudes toward guns may well be important moderators of numerous social behaviors. For this reason, a three-dimensional attitudes scale was constructed. The first factor consists of an abstract set of beliefs concerning the right of the American public to own or not own guns. The second and third factors tap more concrete beliefs about the consequences of gun ownership. Specifically, the second factor assesses the degree to which people believe gun ownership affords protection against crime. The third factor measures the degree to which people believe guns stimulate crime. Discriminant validity of the subscales is shown by the pattern of correlations obtained with the three dimensions and various other social and personality measures. Regression analyses indicate that the subscales are uniquely predicted by different social variables. Discussion centers on the usefulness of such a measure for future research on aggression, social policy, and attitude change.

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Key words: rights, protection, crime, weapons, measurement

INTRODUCTION

America has been designated the “gun culture” by one prominent historian [Hofstadter, 1970]. Guns, and the violence that can result from both the legal and illegal uses of them, have received considerable attention in the media in terms of fictional dramatizations and debate concerning the consequences of their availability to the general public. While it is not known how many weapons are in private hands in the United States, the evidence from a variety of sociological sources indicates that as of 1980 there are approximately 120 million guns, with every other household possessing one [Wright, et al., 1983]. About one-third of the guns owned by Americans are easily concealed handguns, purchased for the stated purpose of self-defense [Wright et al., 1983].

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Address reprint requests to Nyla R. Branscombe, Department of Psychology, University of Kansas, Lawrence, KS 66045.

In the past, weaponry of all sorts and guns in particular were primarily a male-only domain [Arkin and Dobrofsky, 1978] but recently increasing numbers of American women have been purchasing guns [Quigley, 1989]. On the assumption that women are an insufficiently tapped consumer group, Smith and Wesson, the largest American handgun manufacturer, has begun marketing a new line of weapons—the Ladysmith .38 caliber revolver. This company expects sales of handguns to women to continue rising (with another 15 to 16 million making this choice during the next year or two), and their advertisements found in many national women's magazines emphasize how a gun allows a woman to protect herself and her family [Pero, personal communication].

Protection against crime is one possible rationale for gun ownership. The National Rifle Association, a prominent anti-gun-control organization, argues this point. Pro-gun-control advocates, on the other hand, suggest that guns do not protect against criminal victimization but that they actually stimulate crime and other forms of aggressive behavior [cf. Berkowitz, 1974]. The assumption is that if guns were not so easily accessible, then fewer gun-related deaths would occur. These two positions—that guns protect their owners from crime and guns stimulate or cause crime—have been hotly debated in the media. Little research attention has, however, been directed toward understanding how and why individuals differ in their beliefs about guns. Development of a scale to measure these two concrete perspectives on gun ownership, as well as the more general issue of whether gun ownership is (or should be) a basic American right, is presented here as a means of furthering research on aggression-related beliefs and behaviors.

Previous research concerning guns has focused on the consequences of exposure to guns on subsequent behavior. Berkowitz and LePage [1967] argued that because guns are an aggressive cue, their presence encourages aggressive behavior in persons who are already angry. In their research, subjects who had been provoked administered more and stronger shocks to their tormentor when guns were present than when they were absent. Leyens and Parke [1975] similarly reported that insulted subjects who were exposed to slides containing guns selected more intense shock levels than did those exposed to more neutral slides. Increased aggression following exposure to slides of firearms has been observed in both subjects who were previously angered, as well as those who had not experienced prior provocation [Caprara et al., 1984].

While much research has found that the presence of guns does facilitate aggressive responding, all of the relevant studies have not been supportive. Some investigators have been able to obtain a weapons effect with particular types of subjects only: those with little evaluation apprehension [Page and Scheidt, 1971] and/or relatively little research sophistication [Turner and Simons, 1974]. Others have failed to find a weapons effect in angered subjects at all, and the presence of a weapon has even been found to reduce aggression in non-angered persons [Buss et al., 1972; Ellis et al., 1971]. Turner et al. [1977] suggest that these failures to replicate are due to the anxiety and fear that weapons elicit in some individuals.

The effects of weapons on subsequent behavior may well depend upon what associations in memory they trigger [Berkowitz, 1984; Geen, 1990]. Guns may bring to mind thoughts of injuring others in some subjects, increasing the likelihood of aggressive responses (e.g., the weapons effect). For other persons, images of guns could activate thoughts of injury from others, with fear rather than aggression being the predominant response (e.g., reducing the likelihood of obtaining a weapons effect). For yet other

individuals, sporting activities may be more likely to be primed by exposure to guns (e.g., socialization into the hunting subculture).

Given the wide variety of cognitions that could be associated with guns, and the different consequences that are likely to follow from those beliefs, a measure tapping these potential attitudes could be quite useful for future research on aggression. Guns are powerful symbols. For some individuals they represent independence, individual rights, and other traditional American values; for others they symbolize dominance, aggression, and violence [Wright et al., 1983]. Thus, it is possible that the weapons effect occurs only in persons for whom guns are exclusively associated with violence and their likely role in the instigation of crime, that is, persons with relatively negative attitudes toward guns may be most likely to be affected by such exposure.¹ For individuals in whom guns are strongly linked with positive traditional American values, protection against crime, fear of victimization, or even sports, a weapons effect might not emerge. Berkowitz and Alioto [1973] provide direct evidence that it is how an event or object is interpreted that determines subsequent reactions. Their subjects were told a film involving a combative sport that they watched involved either aggression or professional athletes who did not desire to hurt one another. Persons induced to perceive the film in non-aggressive terms did not subsequently behave aggressively toward a person who had previously provoked them, whereas those who believed the event they watched involved deliberate attempts to harm were punitive.

Thus, in order to assist in future research on aggression and to investigate the correlates of the potentially different components of attitudes toward guns, a short three-dimensional scale was constructed and its validation is reported here. Items were written to tap two opposing belief systems: that guns stimulate or cause crime that would not otherwise occur and that guns protect their owner from criminal victimization. In addition, gun ownership is considered by many Americans to be a constitutionally guaranteed right (e.g., the Second Amendment). Acceptance or rejection of this position, regardless of the perceived positive or negative social consequences of guns, was expected to be an important dimension underlying attitudes toward guns.

METHOD

Subjects

Undergraduates (108 males; 168 females) completed several questionnaires during a mass testing session of the introductory psychology subject pool in exchange for course credit. They were primarily white (93%) and in their first year at college (77.9%), with a mean age of 18.5 years.

Procedure

Attitudes toward guns scale (ATGS). A pool of 59 items was initially developed based on their seeming ability to tap the following three dimensions: 1) an abstract component assessing whether gun ownership should be considered a basic American right

¹Research from another attitude domain suggests this possibility. Individuals with negative attitudes toward sexuality (measured in terms of either erotophobia or sexual conservatism) show the greatest influence of exposure to pornographic materials on subsequent behavior [Fisher and Byrne, 1978; Wallace and Wehmer, 1972]. Those with more positive attitudes exhibit relatively little effect of exposure to such materials.

(RIGHTS); 2) a more concrete justification for gun ownership—they protect an individual from criminal victimization (PROTECTION); and 3) a practical justification for banning guns among members of the general public—they stimulate or cause crime that would not otherwise occur (CRIME). Agreement or disagreement with each of the Likert-type items on the scale was indicated by placing a number from 1 to 8 beside each, with higher numbers representing greater acceptance. Some items were reversed for scoring to control for response biases.

Additional personality and social measures. As a means of demonstrating discriminant validity of the ATGS, subjects also completed a variety of personality and social measures in various random orders. To ensure that the attitudes measure was not simply assessing socially desirable responding, the Crowne-Marlow [1964] Social Desirability Scale was administered. It was expected that politically conservative individuals would score higher on the RIGHTS and PROTECTION dimensions, but that political liberals would express more agreement with the guns cause CRIME items. Subjects rated themselves on an 8-point scale ranging from extremely politically conservative (1) to extremely politically liberal (8). Strength of identification with America was measured by having subjects indicate how often they felt proud to be American on an 8-point rating scale with higher numbers representing greater frequency of experience. Because gun ownership is an important element in American history it was expected that attachment to this identity would be especially related to the RIGHTS dimension. Subjects also indicated the degree to which they perceived themselves as a sports fan on an 8-point scale, with higher numbers indicating greater endorsement of this attribute. Guns can be used for sporting purposes so for this reason it was expected that strong sports fans would respond more favorably to the items on the RIGHTS factor.

It was expected that differing attitudes toward guns reflect differing views of the world and people. To examine this possibility, respondents completed the trustworthiness of people, altruism, and independence subscales from Wrightsman's [1964] *Philosophies of Human Nature Scale*, the *Just World Scale* [Rubin and Peplau, 1975], and the *FEM Scale* [Smith et al., 1975]. Higher numbers on the trustworthiness subscale indicate a cynical view of others—that they cannot be trusted (e.g., agreement that people will cheat, commit crimes and sins if they have the chance, and basically lack ethics). We expected that concurrence with the untrustworthiness of others items would be especially related to beliefs that guns provide PROTECTION. Individuals scoring high on the altruism subscale (e.g., agreement that most people try to help others and are basically kind), should see guns as unlikely to change human nature by stimulating CRIME. Persons agreeing with the independence subscale (e.g., people have the courage of their convictions, and can withstand social pressure) should not believe that guns are necessary for PROTECTION. Acceptance of the notion that the world is a just place should be most strongly related to beliefs concerning what causes CRIME—that bad people do, not objects such as guns. High feminist advocates should be least likely to accept the idea that guns provide PROTECTION; only social change should accomplish that goal.

Finally, variables related to the self were examined. Four components of self-esteem including social skills, physical appearance, ability to succeed, and public presentation components were assessed with Hoyle's [1987] *Multifaceted Evaluation of Self Inventory*. Persons higher in self-esteem may respond more positively to citizens possessing any and all RIGHTS. In addition, in order to explore the role of certain chronic

emotional states and beliefs concerning gun ownership, respondents indicated how frequently they experience the following feelings: anger, fear, depression, optimism, and personal independence. Higher scores on a 1 to 8 scale indicated an increased frequency of experiencing these states. Greater amounts of the specific emotions of anger, fear, and depression were expected to be most strongly related to the CRIME dimension. Higher levels of personal optimism for the future and perceived personal independence were expected to be most strongly related to the idea that guns allow for PROTECTION from victimization.

RESULTS

Factor Structure of the Attitudes Toward Guns Scale

A principle components analysis using varimax rotation was performed on the initial pool of items.² Items with factor loadings greater than .50 were retained if they loaded highly on only one of the three factors. The seven items loading most strongly on the first factor tapping the RIGHTS dimension, the five items that loaded exclusively on the second factor, PROTECTION, and the five items loading on the guns stimulates CRIME factor are shown in Table I with their loadings in the final analysis. All three of these factors had eigenvalues greater than 1.9, and 60.5% of the variance in the items was accounted for by the three factors, with the first most general factor of RIGHTS accounting for the most variance (36%).

Correlations Among the Subscales

The RIGHTS subscale was moderately and positively correlated with the PROTECTION subscale ($r = .52$; $P < .001$). The RIGHTS subscale was negatively correlated with the CRIME dimension ($r = -.34$; $P < .001$). The CRIME component was also, as expected, negatively correlated with the PROTECTION items ($r = -.30$; $P < .001$). Because of the negative relationship between the CRIME factor and the other two dimensions of RIGHTS and PROTECTION, all of the items on the CRIME subscale were reverse scored to create the total ATGS measure and for all of the subsequent analyses reported below.

A significant subject gender effect was obtained for mean scores on the RIGHTS factor, $F(1, 274) = 13.99$; $P < .001$, the PROTECTION factor, $F(1, 274) = 4.86$; $P < .03$, the CRIME factor, $F(1, 274) = 7.79$; $P < .006$, and the total ATGS, $F(1, 274) = 15.93$; $P < .001$. Males ($M = 5.30$) tended to be more convinced that people have the right to own a gun than were females ($M = 4.55$). Likewise, men ($M = 3.39$) were more likely to agree that guns protect their owner from crime than were women ($M = 3.08$). Men ($M = 4.04$) were more likely to disagree with the notion that guns stimulate crime compared to women ($M = 3.49$). Males ($M = 4.37$) scored higher on the total scale than did females ($M = 3.80$), indicating overall more positive attitudes toward guns.

²A factor analysis using the oblique rotation method was also performed. The factor structure that emerged was the same, with all of the items loading most strongly on the three factors obtained with the principle components analysis.

TABLE I. Factor Loadings for the Three Subscales of the Attitudes Toward Guns Measure*

Item	Factor loading ^a		
	Rights	Protect	Crime
Right of the Public to Own Guns			
People should be allowed to have handguns in their homes (2)	.73		
A ban on handguns would be a violation of the U.S. constitution (9)	.76		
The right to bear arms is an important freedom for Americans to retain (13)	.80		
Regardless of their potential for injury, it is each person's right to choose to own a gun or not (14)	.81		
People should be able to own guns because many people use them for sporting purposes (18)	.81		
I should be able to get a handgun if I want one (27)	.74		
Gun ownership is a basic American value (30)	.73		
Guns Protect Individuals From Crime			
Owning a handgun decreases a person's chances of being a crime victim (1)		.60	
When you have a handgun of your own, you can stop worrying about being victimized (16)		.78	
Storeowners who have handguns on the premises are less likely to be robbed than are those without a weapon (23)		.67	
Criminals do not attack people who own guns (25)		.76	
The only way you can ensure that you will not be criminally victimized is by owning a handgun yourself (33)		.70	
Guns Stimulate or Cause Crime			
Gun availability makes killing too easy (17)			.62
People commit suicide often because handguns are too readily available (47)			.66
Many murders would not take place if a handgun had not been available (48)			.80
The easy access to handguns is likely to result in an increased crime rate (49)			.87
Guns stimulate crime (50)			.81

*The number in parentheses after the item indicates the item number on the original long scale. Rights, Right of the Public to Own Guns; Protect, Guns Protect Individuals From Crime; and Crime, Guns Stimulate or Cause Crime.

^aOnly factor loadings greater than .30 are indicated.

Reliability of the Subscales

As shown in Table II, the reliability estimate for the full 17-item ATGS is high at .89. The alpha coefficients for each of the individual subscales range from .78 for the PROTECTION factor to .90 for the RIGHTS factor. Hence, each of the subscales are internally consistent. The mean of the total scale ($M = 4.02$), as well as each of the subscales, hover close to the mid-point making it clear that ceiling and floor effects were not problems with these items. Yet these means also suggest that, like nationally representative samples, our respondents do not equally agree with the various aspects or components of attitudes toward gun ownership.

Zero-Order Correlations With Other Measures

Relationships with social variables. As shown in Table III, none of the three subscales or the total ATGS were significantly correlated with the Crowne-Marlowe Social Desirability Scale (all $r_s < .01$; $P > .42$). The three factors are therefore not simply tapping the respondents' desire to hold the socially desirable attitude in this domain.

As expected, each of the subscales do adequately reflect the two political opinion poles but are far from synonymous with political orientation. Politically conservative

TABLE II. Reliability Analyses of the Attitudes Toward Gun Subscales (ATGS)

	Total ATGS	Attitudes Toward Guns Subscale		
		Rights	Protection	Crime
Scale mean	4.02	4.84	2.96	3.71
Standard deviation	1.17	1.66	1.36	1.62
Standardized alpha coefficient	.89	.90	.78	.83
Mean corrected item-total correlation	.54	.70	.55	.63
Subscale correlation with total scale	—	.87	.72	.69
Number of items	17	7	5	5

individuals tend to endorse RIGHTS and PROTECTION items and disagree that guns cause CRIME, whereas those who are liberal show the reverse pattern. Individuals who experience greater pride in their identity as Americans have more positive attitudes as expressed on the total ATGS, and are most likely to endorse the RIGHTS items. Pride in this identity did not, however, encourage acceptance of the specific notion that guns provide PROTECTION from criminal victimization. It is also interesting to note that there was a tendency for individuals low on American pride to agree that guns cause CRIME. Perhaps, for these individuals, the frequent violence caused by guns is what they perceive to be problematic with American society.

On the assumption that guns can be construed as sporting devices, it was anticipated that individuals who perceived themselves as strong sports fans would be more likely to endorse the RIGHTS factor, and overall exhibit more positive attitudes on the ATGS; these relationships were in fact significant. The relationship between self-rated sports identification and the PROTECTION factor proved to be even stronger than that involving the RIGHTS dimension. Furthermore, individuals who were more interested in sports tended to disagree most that gun availability causes CRIME.

Relationships with measures concerning expectations about people. Expectations that human beings cannot be trusted was positively related to the respondents' agreement with the RIGHTS items and even more strongly with the PROTECTION factor. Beliefs concerning the trustworthiness of others did not relate to beliefs concerning the role of guns in the instigation of CRIME, possibly because people are considered the source of crime, not weapons. The degree to which human nature is perceived as altruistic did not relate to any of the subscales, nor did scores on the Just World Scale. The belief that humans are able to be independent from group pressures did correlate negatively with the RIGHTS subscale as well as the total scale. One reason for supporting the U.S. constitutional right to own weapons may be the belief that without such a right people will be unable to act on the basis of their own convictions (i.e., the National Rifle Association's argument that private ownership prevents police and governmental political abuse—see Kessler [1983]).

These observed relationships are, for the most part, consistent with traditional American ideology that people should have the right to control their own destiny, possibly because others cannot be relied upon or trusted to be able to withstand pressure. Individuals with less traditional values—those who hold stronger feminist views—scored lower on the RIGHTS and PROTECTION factors, and were more likely to agree that guns stimulate CRIME, compared to those low in feminism.

Relationships with self measures. The self-esteem inventory was positively related to the total ATGS as well as the abstract RIGHTS dimension. Greater self-esteem

TABLE III. Correlations Between the Attitudes Toward Guns Scale (ATGS) and Other Personality and Social Measures†

Measures	Total ATGS	Attitudes Toward Guns Subscales		
		Rights	Protection	Crime
Social Desirability	.00	.00	.01	-.01
Political Orientation	-.24***	-.25***	-.10*	-.16**
American Pride	.15**	.18***	.04	.09****
Sports Fan	.17**	.12*	.20***	.10*
Lack of Trust in Others	.14**	.11*	.22***	.05
Others are Altruistic	-.06	-.08****	-.07	.01
Independence From Groups	-.11*	-.10*	-.07	-.06
Belief in a Just World	-.06	-.05	-.01	-.07
Feminism	-.27***	-.20***	-.33***	-.15**
Self-Esteem	.12*	.18***	.06	-.00
Anger	-.02	-.06	-.01	.05
Fear	-.07	-.08****	.00	-.06
Depression	-.06	-.08****	.01	-.04
Optimism	.08****	.12*	-.06	.07
Personal Independence	-.08****	-.03	-.17**	.03

†All items on the CRIME factor have been reverse scored so that higher numbers indicate greater disagreement. Otherwise, higher numbers on all variables indicate greater agreement.

* $P < .05$.

** $P < .01$.

*** $P < .001$.

****Approaching significance $P < .10$.

seemingly encourages people to advocate individual rights. Neither of the specific justifications for limiting or permitting gun ownership were correlated with self-esteem, however.

Various emotional state adjectives were included to assess whether such affective experiences might be related to acceptance of particular beliefs concerning guns. For the most part, negative affective states were unrelated to the attitudes subscales (as was a composite of these negative emotion items), although there was a slight tendency for persons who report being more fearful and depressed to be less inclined to perceive gun ownership as a basic right. Longer scales tapping these emotional states, not simply assessing self-reported frequency of experience, might produce stronger relationships with the ATGS. Optimism was related positively to ownership RIGHTS, and personal independence was negatively related to the PROTECTION factor.

Regressions To Determine Which Variables Uniquely Predict Each Subscale

Many of the personality and social variables examined in the zero-order correlations above are themselves intercorrelated. To assess which of the predictor variables examined in this study are uniquely related to the individual subscales, two regression analyses were performed on each. First, each subscale score was regressed on the subset of the individual difference measures that we predicted to be most strongly associated with that ATGS dimension. This was followed up with a regression analysis using all 15 of the measured personality and social variables as predictors of each subscale to determine whether inclusion of the additional variables significantly increased the variance accounted for over and above those included in the initial equation.

Predicting the RIGHTS subscale. It was expected that political conservatives, persons high in self-esteem, those who reported considerable pride in their American identity, and persons who perceived themselves as sports fans would score highest on the RIGHTS factor. Regressing these variables on the RIGHTS subscale produced an overall highly significant equation, $F(4,247) = 6.68; P < .001$. The coefficients for political conservatism ($-.21$) and self-esteem ($.12$) were significant at the .05 level. The beta coefficient for pride in American identity ($.11$) was marginally significant, $P < .07$, and the sports fan rating was not significant. A second regression included the predicted variables described, as well as all of the others measured in the study. The increment in R^2 was not significant [$F(15,223) = .77$]. Thus, the RIGHTS subscale is uniquely predicted by political identification, self-esteem, and pride in American identity.

Predicting the PROTECTION subscale. Persons low in feminism, less optimistic, low in personal independence, low in expectations that humans are independent from group pressures by nature, politically conservative, and high in distrust of others should be especially likely to concur with the notion that guns provide personal PROTECTION from crime. The overall regression equation when these six variables were entered was significant [$F(6,253) = 8.68; P < .001$]. The coefficients for feminism ($-.26$), personal independence ($-.18$), and lack of trust in others ($.18$) were all significant at the .01 level. Hence, those low in feminism, who do not feel they are personally independent, and who are most distrusting of others uniquely subscribe to the PROTECTION subscale items. The second regression equation in which all of the variables measured were included did result in a significant increase in R^2 [$F(15,223) = 2.24; P < .05$]. The only variable besides the three that were significant in the initial equation was a marginal effect for degree the respondents perceived themselves as sports fans ($P < .09$). The coefficient ($.11$) indicated that individuals who were stronger sports fans also tended to believe that guns provide PROTECTION.

Predicting the CRIME subscale. It was anticipated that high levels of negative emotional experiences including anger, fear, and depression would predict responses to the CRIME items, as well as beliefs concerning the altruism of others, just world scores, and political orientation. The regression equation employing these variables only approached conventional levels of significance. The sole significant predictor of the CRIME subscale was political orientation ($-.15$); more conservative persons tended to disagree most that guns cause CRIME. While the increment in R^2 was not significant when all of the remaining variables were included [$F(15,223) = .68$], degree of anger did emerge as a significant predictor in this analysis as well as political orientation. The coefficient for anger ($.16$) suggests that as anger is experienced on a more frequent basis, possibly directed towards people, then objects such as guns are seen as less likely to be the source of CRIME.

DISCUSSION

The ATGS has sound psychometric properties, with each subscale showing good reliability and moderate correlations with the total scale. The first subscale of RIGHTS taps the abstract belief that the American public should or should not be permitted to own guns. The second (PROTECTION) and third (CRIME) subscales assess somewhat opposing views of the potential consequences of widespread gun ownership in the United States. These two more concrete justifications for acceptance or rejection of

gun ownership appear to be relatively incompatible; they show differential relationships with the social and personality measures that were examined. Individuals who tended to agree with the PROTECTION items also tended to disagree with the CRIME items. The two latter factors of CRIME and PROTECTION may be more useful for research on the weapons effect than would the abstract RIGHTS dimension because both concern beliefs about the consequences of gun ownership and how guns can be used.

As expected, male and female subjects differed in their responses to the three attitudes subscales, with males displaying more positive attitudes towards guns. On a variety of public policy questions men display greater tolerance toward aggressive stances in both domestic and international topics than do women [Eagly and Steffen, 1986; Kelley and Schmidt, 1989; Oskamp, 1977]. In this research women were more likely to perceive guns as likely to stimulate crime, less likely to believe that they protect the owner from victimization, and less likely to endorse gun ownership as a general right that the American public should possess, relative to men.

Construct validity of the scale was demonstrated by nonsignificant relations among the subscales and social desirability, and predictable correlations with other measures. Only two of the social variables that were assessed failed to exhibit any correspondence with at least one of the subscales—endorsement of an altruistic conception of human nature and belief in a just world. In terms of the zero-order correlations, individuals who endorsed the RIGHTS component tended to be politically conservative, display pride in their American identity, perceive themselves as sports fans, be low in feminist attitudes, believe that people are not trustworthy and not independent from group pressures, have high personal self-esteem, and consider themselves optimistic. The PROTECTION factor showed a similar pattern of correlations with other social variables as the RIGHTS factor. Persons endorsing the CRIME items displayed a rather different pattern. They tended to be politically liberal, have reduced pride in America, do not consider themselves sports fans, and hold feminist attitudes.

The regression analyses went beyond the simple correlations to indicate which variables, controlling for the others, uniquely predict each subscale. Political conservatism, high self-esteem, and pride in one's American identity predicted the RIGHTS dimension. While the PROTECTION subscale itself is correlated with scores on the RIGHTS factor, it is predicted by different personality variables. Persons who believe that others are not trustworthy, have little self-perceived personal independence, and are low in feminism are most likely to concur with the notion that guns provide PROTECTION from victimization. Finally, political conservatives and those high in anger were most likely to reject the possibility that gun availability might stimulate CRIME.

We were least successful in predicting responses on the CRIME subscale, relative to the other two. As Turner et al. [1977] suggested, anxiety levels may be an important dimension in determining responses to aggressive stimuli and perhaps also the effects people expect such stimuli to have on others. Locus of control is another potential determinant of beliefs concerning the source of others' actions. Those who believe that others' actions are internally controlled or a product of free will should be most likely to disagree that guns could be a potential instigator of aggressive actions. Those who focus on situational factors, as opposed to individual or personal causes of behavior, should be most likely to agree that guns (or any environmental object) could influence people's actions.

We believe that the ATGS will be useful for future aggression, stereotyping, and social policy research. Fazio and his colleagues [Fazio et al., 1983; Fazio and Zanna, 1981] have demonstrated that the nature of the attitude that is accessed and whether it is accessed automatically greatly determine subsequent processing, individuals' responses to the attitude object, and attitude-behavior consistency. Presumably individual differences in the ATGS will have consequences for what associates come to mind when exposed to a gun and what action occurs in the presence of a weapon (e.g., the weapons effect of Berkowitz and LePage [1967]). The ATGS may help resolve why people sometimes show increased aggression in the presence of a weapon and at other times show reduced aggression. Much less attitude-behavior consistency should be expected from individuals whose scores on the three dimensions (particularly the CRIME and PROTECTION factors) are less strongly correlated. Presumably holding these conflicting beliefs would lead to behavioral inconsistency, with actions dependent upon which set of beliefs were more salient at any given time.

Judgments of crime perpetrators who employ weapons as well as their victims might also be expected to vary depending upon the observer's position on the ATGS. For example, those individuals showing high agreement with the CRIME items might show a greater tendency to make external attributions for events involving a gun compared to those who do not believe that guns themselves elicit CRIME. In addition, individuals who vary in their beliefs about guns and their potential consequences might advocate very different responses to both interpersonal and international provocative situations, as well as explain military outcomes in very different ways. For example, in those individuals who believe that guns stimulate CRIME, the presence of military forces might be seen as likely to precipitate war. In contrast, for those persons who strongly hold the belief that guns provide PROTECTION, the presence of military forces might be seen as likely to prevent war.

Attitudes toward guns do not simply consist of a single dimension in which responses toward any relevant item will be either uniformly positive or negative. Results from public opinion polls using representative samples of the American population concerning gun control issues have varied drastically depending upon the wording of the question and the exact issue assessed. We have shown that there are at least three unique dimensions underlying attitudes toward guns, and differing questions on national surveys no doubt differentially tap each domain. For example, in one major survey, 87% of the respondents agreed that a citizen has a right to own a gun, 50% agreed that people should be prepared to defend their own homes, and 50% believed that the control of guns would not decrease violence at all [Wright et al., 1983]. Such discrepancies in frequency of agreement with these different items may be accounted for by recognizing that the components of attitudes toward guns are not strongly correlated, and that each of the items presented above are assessing the RIGHTS, PROTECTION, and CRIME factors respectively.

Finally, future research needs to assess how these important public policy related beliefs develop. Is it exposure to the media showing guns in either a positive or negative light, parental influence, or even adult experience with violence? Some sociological investigations suggest that actual gun ownership is determined by family socialization variables [Lizotte and Bordua, 1980], while others indicate that guns are purchased as a result of perceived vulnerability to crime [Smith and Uchida, 1988]. Whatever the origins of actual gun ownership and attitudes toward guns, the social consequences of

differing attitudes deserves additional research attention. Furthermore, attempts to develop attitude change strategies require an understanding of the dimensions underlying beliefs such as those described here. Persuasion strategies will necessarily need to differ according to which of the three factors respondents are most strongly committed.

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